

Notice of Allowability

Application No.

10/727,277

Examiner

Brooke J. Dews

Applicant(s)

ALAPPAT ET AL.

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 08/13/2007.
2. ☒ The allowed claim(s) is/are 1,5,6,10-13,15-17,22,24,25,27 and 28.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>20070914</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Cory G. Claassen, having Reg. No. 50296, on 09/13/2007. Accordingly, since a complete record of the interview has been incorporated in the instant examiner's amendment, no separate interview summary form is included in the instant office letter MPEP § 713.04.

Corrections Made in the Application

2. The application has been amended as follows:

In the Claims:

The below described amendments to the claims are necessary to further clarify the claimed invention.

CLAIM AMENDMENTS

3. This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method, comprising:
determining a shelf address and a slot address of a board installed in a card modular platform, wherein the shelf address corresponds to a physical shelf of the card modular platform and the slot address corresponds to a physical slot location on the shelf of the card modular platform; and

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automatically assigning a static network Internet Protocol (“IP”) address for at least one network port on the board based on a combination of the shelf address and the slot address, wherein the static network IP address is automatically assigned by performing operations including:

configuring an address proxy server with an address lookup table containing a unique network address for each shelf address and slot address combination;

sending the shelf and slot addresses from the board to the address proxy server;

querying the address lookup table based on the shelf and slot addresses to retrieve a corresponding network address; and

returning the network address to the board.

2. (Previously Cancelled)

3– 4. (Cancelled)

5. (Previously presented) The method of claim 1, wherein the shelf and the slot addresses are respectively obtained by issuing GetAddressInfo and GetShelfAddressInfo IPMI (Intelligent Platform Management Interface) commands.

6. (Previously Presented) The method of claim 1, wherein the board is made by an original equipment manufacturer (OEM) and the shelf and the slot addresses are obtained by employing OEM-specific IPMI (intelligent Platform Management Interface) commands.

7. – 9. (Cancelled)

10. (Previously Presented) A method comprising:
obtaining, for a network port on a board installed in a card module platform, a temporary IP (Internet Protocol) address from a DHCP (Dynamic Host Configuration Protocol) server;
receiving an initial boot image from the boot server;
determining a shelf address and a slot address of the board installed in the card module platform by executing instructions in the initial boot image;

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sending the shelf and slot addresses to a boot server;
receiving a final boot image along with an IP address from the boot server;
executing the final boot image; and
setting a static IP address for the board in accordance with the IP address that was received from the boot server with the final boot image.

11. (Original) The method of claim 10, wherein the boot server comprises a PXE (pre-boot execution environment) server.

12. (Original) The method of claim 10, further comprising:
executing firmware on the board to initialize a network interface; and
performing a DHCP message exchange via the network interface to obtain the temporary address.

13. (Original) The method of claim 10, further comprising returning an IP address for the boot server in addition to the temporary IP address.

14. (Previously Canceled)

15. (Currently Amended) The method of claim 10, further comprising:
configuring the boot server with an IP address lookup table containing a unique network address for respective shelf address and slot address combinations; and
querying the IP address lookup table based on the shelf and slot addresses to retrieve the IP address to be assigned as the static IP address.

16. (Original) The method of claim 10, wherein data exchanged between the board and the boot server is sent via the Trivial File Transfer Protocol (TFTP).

17. (Original) The method of claim 10, further comprising co-locating the DHCP server and the boot server on the same machine.

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18. – 21. (Cancelled)

22. (Currently amended) A card modular platform board, comprising:

a printed circuit board (PCB) on which a plurality of components are operatively coupled and linked in communication via circuitry on the PCB, including,

a processor;

memory;

at least one backplane connector, configured to couple to a backplane installed in a card modular platform shelf having a plurality of slots;

a network interface coupled to a network port; and

at least one of a non-volatile storage device or a mass storage device; and

machine executable instructions stored in said at least one of the non-volatile storage device or the mass storage device, which when executed by the processor perform operations in response to insertion of the board into a slot, comprising:

initializing the network interface;

performing client-side operations in a DHCP (Dynamic Host Configuration Protocol) message exchange to obtain a temporary IP (Internet Protocol) address from a DHCP server;

~~determining addresses for the shelf and the slot;~~

~~sending the shelf and slot addresses to a boot server;~~

~~receiving a bootable image along with an IP address from the boot server; and~~

~~booting the bootable image;~~

receiving an initial boot image from a boot server;

executing instructions in the initial boot image to obtain the shelf and slot addresses;

and

receiving a final boot image along with a static IP address from the boot server;

booting the final boot image.

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wherein the static IP address that was received from the boot server is assigned by the ~~bootable~~ final boot image as ~~[[a]]~~ the static IP address for the network port,

wherein the static IP address is assigned dependent upon the shelf and slot addresses and independent of a media access control ("MAC") address of the PCB, ~~or the plurality of components on the PCB.~~

23. (Cancelled)

24. (Currently Amended) A tangible machine-readable medium to provide instructions, which when executed by a card modular platform board performs operations in response to insertion of the board into a slot of a card modular platform shelf, including:

receiving an initial boot image from a boot server;

executing instructions in the initial boot image to obtain shelf and slot addresses of the board; ~~determining an address for the shelf and the slot; and~~

receiving a final boot image;

booting the final boot image; and

automatically assigning a static Internet Protocol ("IP") address for the network port by the final boot image based on the shelf address and the slot address.

25. (Currently Amended) The tangible machine-readable medium of claim 24, wherein ~~execution of the machine instructions automatically assigns the~~ static IP address is determined by performing an algorithm that generates a unique address in response to providing the shelf and slot addresses as inputs to the algorithm.

26. (Cancelled)

27. (Previously Presented) The tangible machine-readable medium of claim 24, wherein the medium comprises a firmware storage device, and the instructions comprise firmware.

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28. (Previously Presented) The tangible machine-readable medium of claim 24, wherein the shelf and the slot addresses are respectively obtained by issuing GetAddressInfo and GetShelfAddressInfo IPMI (Intelligent Platform Management Interface) commands via execution of the instructions.

NOTE: The claims amended by this examiner's amendment have been referred to by their original claim number.

4. Also original claims 1-16 have been renumbered as follows:

Original claim numbering**New claim numbering**

1	1
2	-
3	-
4	-
5	2
6	3
7	-
8	-
9	-
10	4
11	5
12	6
13	7
14	-
15	8
16	9
17	10
18	-
19	-
20	-
21	-
22	11
23	-
24	12

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25	13
26	-
27	14
28	15

Distinguishing Features Recited in the Claims

5. Claims 1, 5, 6, 10-13, 15-17, 22, 24, 25, 27, and 28 are allowed. Claims 3, 4, 7-9, 18-21, 23, and 26 are have been cancelled without prejudice.

6. The following are reasons for allowance (See **MPEP 1302.14**):

The primary reasons for allowance of *claim 1* in the amended application is the combination with the inclusion in the claim **“wherein the static network IP address is automatically assigned by performing operations including: configuring an address proxy server with an address lookup table containing a unique network address for each shelf address and slot address combination; sending the shelf and slot addresses from the board to the address proxy server; querying the address lookup table based on the shelf and slot addresses to retrieve a corresponding network address; and returning the network address to the board”**.

The primary reasons for allowance of *claim 10* in the amended application is the combination with the inclusion in the claim that **“receiving a final boot image along with an IP address from the boot server; executing the final boot image; and setting a static IP address for the board in accordance with the IP address that was received from the boot server with the final boot image”**.

The primary reasons for allowance of *claim 22* in the amended application is the combination with the inclusion in the claim **“receiving an initial boot image from a boot server; executing instructions in the initial boot image to obtain the shelf and slot addresses; receiving a final boot image along with a static IP address from the boot server; and booting the final boot image”**.

The primary reasons for allowance of *claim 24* in the amended application is the combination with the inclusion in the claim **“receiving an initial boot image from a boot server; executing instructions in the initial boot image to obtain shelf and slot addresses of the board;**

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receiving a final boot image; booting the final boot image; and automatically assigning a static Internet Protocol ("IP") address for the network port by the final boot image based on the shelf address and the slot address".

The prior art of record including the disclosures of Kirk Yates et al. (US Publication 2004/0230866), David Lawrence Evans (US Patent 6898702), Bruce S. Harrison et al. (US Publication 2004/0177133), and Steven M. French (US Publication 2002/0073249) neither anticipates nor renders obvious the above recited combination. Because claims **5, 6, 11-13, 15-17, 25, 27, and 28** depend directly or indirectly on either one of claims 1, 10, 22 or 24, these claims are considered allowable for at least the same reasons noted above.

Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably **accompany** the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brooke J. Dews whose telephone number is 571-270-1013. The examiner can normally be reached on M-Th 7:30-5:00, alternate F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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